

## REMARKS

### ***Status of the Application***

In response to the amendment filed on 12/26/02, the Examiner withdrew all rejections issued in the Office Action mailed on 9/20/02 (paper No. 7), and issued new grounds of rejection addressed herein below. In light of the new grounds of rejection, the Examiner withdrew the finality of the 9/20/02 Office Action making the rejections issued in the present Office Action (paper No. 9) non-final.

In the present Office Action, claims 1-2 and 5-7 were rejected. In the present Amendment, claims 1 and 5 have been amended so that claims 1-2 and 5-7 are pending. In addition, Applicants have amended Table 6 to replace example numbers 14 and 15 with correct example numbers 16 and 17, respectively, and Table 7 to replace example numbers 14 and 15 with correct example number 18 and 19, respectively. The mischaracterization of example numbers in both Table 6 and Table 7 is an obvious error that is easily recognized when viewed in light of the data and headings contained in Table 9. Applicants regret any inconvenience that this error has caused the Examiner. No new matter is added.

### ***Rejections Under 35 U.S.C. § 112, first paragraph***

In the Office Action, claims 1-2 and 5-7 were rejected under 35 U.S.C. § 112, first paragraph for allegedly "containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Although the Applicants amended claims 1 and 5 to recite that "gloss value is decreased by at least twice as much as a coating composition comprising 0 wt.% of spheroidal particles" and "flow parameters are decreased by no more than 1.5 times as much as the coating composition comprising 0 wt.% of spheroidal particles", the Examiner takes the position that the claims as amended still do not satisfy the written description requirement because based on *In re Wright*, 866 F.2d 422 (Fed. Cir. 1989) and MPEP 2163, "there does not appear to be a written description requirement of either phrase in the application as originally filed".

More specifically, the Examiner asserts that when viewing the Table 9 comparison of gloss and flow parameters for coating compositions containing no

microspheres to coating compositions formulated to contain microspheres in accordance with Applicants' claimed invention, the data indicates that the flow parameters for inventive examples 4, 15, 17, and 19 are only 1.5, 0, 2.6, and 1.2 times less than comparative examples 1, 14, 16, and 18, respectively, while the gloss value for inventive examples 4, 15, 17, and 19 is decreased by as much as 2.6, 2.1, 2.7, and 3.2 times that of comparative examples 1, 14, 16, and 18, respectively. The Examiner alleges that although "there is support for the recitation that the gloss of the presently claimed powder coating composition is 2.6 times (or 2.1 times or 2.7 times or 3.2 times) less than the gloss of coating composition comprising 0 wt.% of spheroidal particles and the flow parameter of the presently claimed powder coating composition is 1.5 times less than (or the same as or 2.6 times less than or 1.2 times less than) the flow parameter of coating composition comprising 0 wt.% of spheroidal particles, there is no support to recite that the gloss is 'decreased by at least twice as much' or that the 'flow parameter is decreased by no more than 1.5 times as much'." The Examiner claims that the "at least" and "no more than" claim language utilized by Applicants "encompasses embodiments wherein the gloss of the present composition is decreased by at least 3 times, 5 times, 10 times, etc. while the flow parameter is decreased by no more than 1.4 times, 1.3 times, 1.1 times, etc, for which there is no support in the specification as originally filed", and alleges that "[t]here is only support for each of the specific embodiments as disclosed in Table 9 and discussed above."

Although Applicants have amended claims 1 and 5 to more clearly define their claimed invention as having a gloss value that is from about 2 to about 3 times less than the gloss value of a coating composition comprising 0 wt.% spheroidal particles and flow parameters that are no more than from about 0 to about 3 times less than the coating composition comprising 0 wt.% spheroidal particles, Applicants respectfully disagree with the Examiner's assertion that there is only support for each of the expressly disclosed embodiments as set forth in Table 9. On the contrary, MPEP section 2163.02 clearly indicates that Applicants' claimed invention does not have to be set forth *in haec verba* (i.e. literally or using the same terms) in the specification in order for the written description requirement to be satisfied. As explained in section 2163.02 of the MPEP, an applicant satisfies the written description requirement by conveying "with reasonable clarity to those skilled in the

art that, as of the filing date sought, he or she was in possession of the invention, and that the invention in that context, is whatever is now claimed.” Section 2163.02 goes on to explain that the requisite possession “may be shown in a variety of ways including description of an actual reduction practice....” As set forth in section 2163, section I., “[a]n application specification may show actual reduction to practice by describing testing of the claimed invention ....” In conformity with the written description requirement as set forth in MPEP section 2163, Applicants are simply claiming that which was actually reduced to practice in Examples 1-19, examples that were part of the specification as originally filed, and clearly indicate that Applicants possessed the claimed invention on the filing date of the application. Accordingly, Applicants’ respectfully request that the Examiner withdraw this rejection.

The Examiner further asserts that as the “applicants discuss only one type of flow parameter, i.e. Inclined Plate Flow at 375° F (see Tables 2-3)”, “there is no written description requirement of ‘flow parameters’ in the application as originally filed.” As a result, the Examiner claims that Applicants’ specification as originally filed does not provide enough support for a claim “that all different types of flow parameters are ‘decreased by no more than 1.5 times as much [as] coating composition[s] comprising 0 wt.% of spheroidal particles’”, and therefore alleges that Applicants originally filed specification only provides support “for the recitation of the one specific type of flow parameter set forth in the present specification.”

Applicants, however, respectfully disagree with the Examiner as Applicants have clearly indicated at various points in the specification as originally filed as to what they mean by the term “flow”. More specifically, at page 2, lines 30-33, the specification expressly indicates that “[t]he powder coatings of this invention provide the formulator with an opportunity to control the gloss of the final coatings while minimizing or eliminating the negative effects of the prior art attempts at controlling gloss; i.e., loss of coating flow and creation of ‘orange peel’ surface effects.” (emphasis added). In explaining the application of powder coatings in accordance with the invention, the Applicants indicate at page 3, lines 9-14, that “[f]ollowing deposition of the powder coating to the desired thickness, the coated substrate is typically heated to melt the composition and cause it to flow.” (emphasis added).

The Applicants further explain at page 4, lines 12-15, that the spheroidal particles "may be present in an amount of from 5 wt% to 60 wt%" and that "[a]bove 60 wt%, an unacceptable loss of coating flow results." Finally, in comparing the coating compositions of examples 2 and 5 on page 7, lines 19-25, the Applicants attribute the significantly higher "loss of flow" of the composition of example 5 in comparison to that of example 2, to example 5's use of spheroidal particles having a 5  $\mu$ m median diameter because 5  $\mu$ m is the median diameter at the lowest end of the acceptable range. The results evidencing the "loss of flow" discussed in the comparison of examples 2 and 5 is immediately discernible by referencing Table 3, which clearly indicates that such "loss of flow" was measured via "Inclined Plate Flow (mm) at 300° F (149°C)". Additional support for the term "flow" can be found at page 8, lines 1-7 and 11, page 9, lines 15-17, and page 10 lines 12-15.

In a closer examination of Applicants' comparison of examples 3 and 6 on page 8, at lines 1-7, it becomes readily apparent that the "Inclined Plate Flow (mm) at 300° F (149°C)" of Table 3 was simply a method used by Applicants' in evaluating the "flow" of the various coating formulations tested by Applicants. Specifically, Applicants expressly indicated that the spheroidal particles of example 3 "had less of a negative effect on flow", and proceeded to set forth in parentheses the phrase "67 v. 54". Upon referencing examples 3 and 6 in Table 3, the numbers 67 and 54 appear in the Inclined Plate Flow column. As Applicants are unaware of any requirement that every test method for evaluating a given characteristic or attribute of an invention be expressly disclosed in order to provide support for directing a claim to such a characteristic, Applicants respectfully request that the Examiner withdraw this rejection.

Furthermore, as the Examiner is well aware, terms that are not expressly defined in the specification as filed take on their ordinary and customary meaning. Indeed, section 2111.01 of the MPEP indicates that during examination the words of a claim must be given their plain meaning unless applicant has provided a clear definition in the specification. As a result, when Applicants' usage of the terms "flow" and "parameters" is evaluated in the proper context, i.e., in accordance with the powder coating that is claimed by Applicants, it becomes apparent that Applicants' fully intended to accord both "flow" and "parameters" their ordinary and customary meanings.

More specifically, "flow" is defined in the Paint/Coatings Dictionary of the Federation of Societies for Coatings as both the "[m]ovement of a coating during and after application and before the film is formed" and as being a "[p]roperty which a coating or ink possesses of leveling after application", "leveling" being defined as "[t]he measure of the ability of a coating to flow out after application so as to obliterate any surface irregularities such as brush marks, orange peel, peaks, or craters which have been produced by the mechanical process of applying or coating." The Paint/Coatings Dictionary further explains within the definition of "flow" that "[c]oatings may possess excessive flowing properties and may sag or run to an undesirable degree from vertical or inclined surfaces." Moreover, Dictionary.com defines "parameters" as "a factor that determines a range of variations; a boundary...." See <http://dictionary.reference.com/search?q=parameter> (last visited April 1, 2003). Accordingly, in light of the disclosures made in the specification as originally filed regarding the type of "flow" being referenced in the claims, and the ordinary and customary meanings of the terms "flow" and "parameters", a person of ordinary skill in the art would know that Applicants' had possession of the claimed invention on the filing date of the application. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

***Rejections Under 35 U.S.C. § 112, second paragraph***

Claims 1-2 and 5-7 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner claims that the Applicants' use of "low gloss value and good flow parameters" is confusing because "it is not clear what is meant by each phrase." The Examiner further explains her rejection by indicating that further clarification is needed regarding: a) what values of gloss are considered low, b) how and when the flow parameters are determined to be "good", as well as what is meant by the term "good", and (c) what the phrase 'flow parameters' encompasses.

As a "low gloss value" and "good flow parameters" are simply results achieved by Applicants' claimed invention, Applicants have deleted both terms from both claims. In addition, Applicants refer the Examiner to the discussion contained herein above regarding what the terms "flow" and "parameters" mean in order to ascertain what is encompassed by the term.

The Examiner further asserts that the scope of Applicants' claimed invention is confusing because it is unclear as to what the limitations "gloss value is decreased by at least twice as much as a coating composition comprising 0 wt.% of spheroidal particles" and "flow parameters are decreased by no more than 1.5 times as much as the coating composition comprising 0 wt.% of spheroidal particles" mean. Specifically, the Examiner requests that the Applicants clarify 1) how a gloss value can be decreased by at least twice as much as the gloss value of a coating compositions comprising 0 wt.% spherical particles, and 2) whether the gloss value limitation means that the gloss of the present invention is at least two times less than the gloss of a coating composition comprising 0 wt.% spherical particles.

Applicants' have amended claims 1 and 5 to further define their invention, and assert that their amendments render this rejection moot. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

#### **Rejection under 35 U.S.C. § 102**

Claims 1-2 and 5-7 were rejected under 35 U.S.C. §102 (e) as being anticipated by Rigosi et al. (U.S. Patent No. 6,455,630). The Examiner asserts that "Rigosi et al disclose powder coating composition comprising polyolefin including polypropylene and polyethylene and 1-40% glass microsphere which has diameter of 30-70  $\mu\text{m}$ ." The Examiner further asserts that at column 1, lines 6-7, column 2, lines 45-59, column 3, lines 3-38, column 4, lines 19-21, and column 7, lines 38-39, Rigosi discloses a "method for adding microsphere to powder coating composition...."

Although the Examiner recognizes that Rigosi does not explicitly disclose either the median diameter of the microspheres utilized therein, or the gloss or flow parameters for the powder coating composition of Rigosi, the Examiner asserts that these limitations are inherently contained in the powder coating composition of Rigosi. More specifically, the Examiner reasons that given that 1) "the diameter of the microspheres ranges from 30-70 $\mu\text{m}$ , i.e. maximum falls within 30-70 $\mu\text{m}$  which overlaps value presently claimed, it is clear that the median diameter will inherently be greater than 10  $\mu\text{m}$  as presently claimed" and 2) "Rigosi et al. disclose powder coating composition comprising polyolefin and microsphere identical to that presently claimed, it is clear that the powder coating composition would inherently exhibit gloss and flow parameters identical to those presently claimed."

In light of the Applicants' deletion of polyethylene, polyethylene terephthalate, polybutylene terephthalate and polypropylene resins from claims 1 and 5, however, Applicants respectfully assert that Rigosi does not anticipate Applicants' claimed invention. In contrast, by not disclosing the saturated polyesters, unsaturated polyesters, acrylic resins, acrylate resins, polyester-urethanes, acrylic-urethanes, epoxy, epoxy-polyester, polyester-acrylics, epoxy-acrylics, polyamides, or polyvinylchloride resins that are claimed by Applicants, Rigosi fails to disclose each and every element of Applicants' claimed invention, and therefore is not an anticipatory reference. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

The Examiner also rejected claims 5-7 under 35 U.S.C. §102 (e) as being anticipated by Muthiah et al. (U.S. Patent No. 6,017,640) when "taken in view of the evidence in *Encyclopedia of Polymer Science and Engineering*". The Examiner asserts that Mathiah "discloses low gloss powder coating composition comprising resin including unsaturated polyester and polyacrylates and ceramic, hollow glass, or resin microsphere." The Examiner also alleges that column 6, lines 13-16 and column 13, lines 53-55 and 62-63 of Mathiah discloses "a method of reducing gloss by adding the microsphere to the powder coating composition." The Examiner then proceeds to calculate that the composition disclosed at column 2, lines 23-37 comprises 0.08-50% microsphere. Although the Examiner acknowledges that there is "no explicit disclosure of the median particle diameter and the maximum particle diameter of the ceramic or hollow glass microsphere", the Examiner asserts that "it is well known, as found in the *Encyclopedia of Polymer Science and Engineering* that ceramic microspheres typically possess average particle size of 10-30  $\mu\text{m}$  and maximum particle size of 5-60  $\mu\text{m}$  (page 789) while hollow glass microspheres possess average particle size of 10-200  $\mu\text{m}$  and average particle diameter of greater than 15  $\mu\text{m}$  (pages 791-792)."

Additionally, in responding to the Applicants' arguments that Muthiah neither alone, nor in combination with the *Encyclopedia of Polymer Science and Engineering* discloses the specific combination of microsphere size and quantity claimed by Applicants, and furthermore does not disclose that these specific microspheres can be used to successfully produce a powder coating having a gloss value reduced by about twice as much as a powder coating containing no microspheres, while at the



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same time having the flow parameters only marginally decreased by about 1.5 times that of a powder coating not containing any microspheres as is claimed by Applicants, the Examiner asserts that Muthiah inherently possesses the gloss and flow parameters as presently claimed by Applicants. The Examiner supports her assertion by claiming that Mathiah discloses microspheres contained in the same thermoplastic polymer claimed by Applicants, and that the microspheres disclosed by Mathiah, when viewed in light of the disclosure of the *Encyclopedia of Polymer Science and Engineering*, possess the same diameter as the microspheres claimed by Applicants.

Applicants, however, have reviewed the disclosure of Mathiah and respectfully assert that Muthiah does not anticipate Applicants' claimed invention. Applicants' reassert their position that Muthiah does not disclose using microspheres as claimed by Applicants to formulate a powder coating composition that has gloss value and flow parameters as claimed by Applicants.

Although the Examiner argues that the gloss and flow parameters claimed by Applicants are inherently disclosed in Muthiah, Applicants direct the Examiner's attention to Section 2112 of the MPEP, which expressly indicates that the "fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of the result or characteristic." Section 2112 then cites the Federal Circuit's decision *In re Rijckaert* noting that in that case the Federal Circuit reversed an inherency rejection because "the inherency was based on what would result due to optimization of conditions, [and] not what was necessarily present in the prior art". 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). Section 2112 proceeds to make it clear that in establishing inherency, "the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" Section 2112 further explains that inherency "may not be established by probabilities or possibilities", and that the "mere fact that a certain thing may result from a given set of circumstances is not sufficient." As a result, section 2112 expressly requires an Examiner who relies on the theory of inherency to "provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art."



Applicants respectfully assert that the Examiner has failed to provide adequate support for asserting that the gloss and flow parameters claimed by Applicants are inherently present in the powder coating of Muthiah. Instead, the facts at hand indicate that, like the rejection reversed by the Federal Circuit in *In re Rijckaert*, the Examiner is simply hypothesizing as to what could result if the conditions for obtaining a powder coating having a low gloss value that does not unduly affect the flow parameters of the powder coating were to be optimized so as to achieve such a result, and is not basing such a rejection on what is necessarily present in Muthiah. In fact, the Examiner has failed to point to extrinsic evidence that clearly indicates that 1) the powder coating of Muthiah necessarily possesses Applicants' claimed gloss value while at the same time only marginally decreasing the flow parameter as claimed by Applicants, and 2) a person of ordinary skill in the art would recognize from reviewing the disclosure of Muthiah that a powder coating containing 5 to 60 wt.% microspheres having a median particle diameter greater than 10 microns and a maximum diameter of about 50 microns would produce a powder coating in accordance with Applicants' claimed invention that has a gloss value decreased by about 2 to about 3 times as much as a powder coating not containing microspheres, while only marginally decreasing the flow parameters of the powder coating by about 0 to 3 times as much as a powder coating not containing microspheres.

In contrast, the disclosure of Muthiah focuses on an allegedly improved method for dual curing of opaquely pigmented or thick filmed powder coating compositions used to coat heat sensitive substrates. (See column 4, lines 63-67 and column 5, lines 4-15). Nowhere does Muthiah mention adding microspheres having the specific attributes as claimed by Applicants so as to produce a powder coating having a gloss value that is decreased to the degree claimed by Applicants while only experiencing Applicants' claimed marginal decrease in flow parameters. While it is true that Muthiah indicates at column 13, lines 62-63 that hollow glass resin microspheres may be used to opacify or lower the gloss of a powder coating, and column 14, lines 11-15 of Muthiah indicates that gloss control agents, such as polyethylene waxes, oxidized polyethylenes, polyamides, and teflons may be used as gloss control agents, nothing in the disclosure of Muthiah indicates either the quantity of the additive, or the size of the microspheres, and in the case of the gloss

control agents, whether the control agents are even microspheres, that must be added to Muthiah's powder coating in order to meet Applicants' claimed gloss and flow parameter limitations.

Indeed, the Examiner is impermissibly using "possibilities" and "probabilities" to allege that Applicants' claimed flow parameters and gloss values are inherently disclosed by Muthiah. As indicated hereinabove, using probabilities and possibilities to establish inherency is expressly prohibited by Section 2112 of the MPEP. Furthermore, even if Applicants' claimed gloss value and flow parameters were to result from a haphazard combination of the ingredients disclosed by Muthiah, section 2112 of the MPEP makes it clear that such a result is not sufficient to prove that the claimed elements are inherently disclosed. Accordingly, the Examiner has failed to provide a basis in fact and/or technical reasoning to reasonably support the determination that Applicants' claimed gloss value and flow parameters necessarily flow from that which is disclosed by Muthiah, and therefore claims 5-7 are not anticipated by Muthiah. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

### Summary

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicant's representative at the telephone number below to resolve any remaining issues.

If there are any fees due over and above the fee for the one-month extension of time, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,



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